REMARKS/ARGUMENTS

By this paper, Applicant replies to the Office Action of March 2, 2011 and respectfully requests reconsideration of the application.

Claims 128-183 are now pending. Claims 128, 129, 154, 170, and 177 are independent.

I. This amendment may be entered under 37 C.F.R. § 1.116(b)(1)

The only amendment to the claims is to cancel claim 140. This amendment may be entered pursuant to 37 C.F.R. § 1.116(b)(1).

II. § 112 ¶ 1 issues

Because the Action does not number its paragraphs, this reply to the Action is less clear than it might otherwise be. See section VIII of this paper, starting at page 31.

A. Claims 128, 129, 132, 135, 137, 142, etc.

The language "determining … when an order to trade an instrument is placed by a market-maker" is supported in paragraph [0032], which describes how trading management rules differ for market-makers than for other traders. The language is further supported by the flowchart branch at the top of Fig. 4B.

B. Claims 128, 133, 138, 153, 156, 165, 176, and 177

The Action requests identification of support for claims 128, 133, 138, 153, 156, 165, 176, and 177. The Supplementary Amendment of November 2010 stated as follows:

> Claim 177 is supported at ¶ [0051] of the application as originally filed. The Action does not discuss any analogous limitation, and thus the claim is currently patentable.

Paragraph [0051] reads as follows:

> [0051] 15. Since market makers may believe they are, or intend to be, always passive, market maker API accounts may be set up such that the brokerage fees for all market maker transactions (both passive and aggressive) are the same.

If the Examiner has any remaining question after the explanation of November 2010, the question will have to be more specific.

C. Claim 140

Claim 140 is cancelled, without prejudice or disclaimer.

D. Claim 146

Claim 146 is supported at, among other places, Fig. 4B, boxes 202A, 202B, and 202C.

III. Claim 129 and Katz '093

A few isolated words of claim 129 are compared to Katz '093 in unnumbered paragraphs at pages 5-6 of the Action. Claim 129 recites as follows:

> 129. A method, comprising the steps of:
>
> by a computer of an electronic trading system, evaluating orders to trade an instrument to ***determine whether the orders are placed by market-makers***, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument;
>
> ***based on a determination*** by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and t***hat the crossed orders are each from market makers***, automatically taking at least one of the following actions:
>
> (a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other;
>
> (b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other;
>
> (c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other.

The Action considers bits and pieces of the first two paragraphs of this claim as follows:

> **As to Claim 129,** Katz teaches a method, comprising the steps of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9. line 38; and Col. 10, line 62 through Col. 11, line 47);
>
> based on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and that the crossed orders are each from market makers, automatically taking at least one of the following actions (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47):

The Action is exceedingly unhelpful. It appears that the Action ignores much of the claim language, and tries to bury that omission by citing ***almost FOUR FULL COLUMNS*** (Col. 6, line 64 through Col. 7, line 56; Col. 8 line 66 through Col. 10, line 10; and Col. 10 line 62 through Col. 11, line 47) for the first two paragraphs of the claim, with no identification of elements of the reference thought to correspond to the particular elements of the claim. Designating large "chunks" of a reference with no further precision or explanation gives no meaningful insight into the Examiner's thinking. Designating ***FOUR COLUMNS***, with no element-by-element designation or discussion, violates the requirements of 37 C.F.R. § 1.104(c), to designate parts relied on "as nearly as practicable" and to give a "clear explanation" of pertinence. In absence of a meaningful explanation in the Action, it appears that the language "determining whether orders are placed by market makers" was simply ignored.

The designated portions of Katz '093 are reproduced here:

Col. 6, line 64 through Col. 7, line 56:

> An automated exchange according to the invention is administered by a business entity, for example, the International Securities Exchange LLC (ISE) of New York, N.Y., which authorizes certain persons as members. The business

entity may authorize different types of members or participants, such as a primary market maker (PMM) and one or more competitive market makers (CMMs) to enter quotations in particular classes of options. While there is only one PMM for each class of options traded on the exchange, there may be multiple PMM participants on the exchange, each trading different classes of options. The business entity may also authorize PMMs and CMMs to place orders in options classes traded on the exchange, as well as one or more broker-dealers to enter orders as principal or agent in options classes traded on the exchange, which broker-dealers shall be referred to herein as electronic access members ("EAMs").

Orders entered on behalf of registered broker-dealers, including PMMs, CMMs and EAMs, are referred to herein as professional orders. Orders entered on behalf of market makers on competing exchanges **18** are a particular type of professional order referred to herein as "FARMM" orders. Orders on behalf of any party that is not a registered broker-dealer are referred to as public customers orders.

It is to be understood that the names, types and arrangement of participants and orders are used as examples for purposes of illustration. It is to be understood that the particular arrangement of participants and orders may be varied and remain within the scope of the invention. According to one embodiment of the invention, three distinct type of order are defined, namely public customer orders, professional orders and FARMM orders as defined above. Nevertheless, a greater or fewer number of order types may be defined. The embodiment described herein conform to the rules imposed by a certain type of business entity. It is to be understood that an exchange which conforms, to a different set of rules is nevertheless within the scope of the invention. Further, it is to be understood that the term "exchange" does not limit the use of the invention to an entity that is a registered exchange, that is, the invention may be administered by other types of business entities, such as broker-dealers, associations or others.

FIG. **1** shows an exchange **1** according to an embodiment of the present invention-connected with a number of entities. An order placed on the exchange **1** may be a limit order that specifies an order size, that is, an integral number of contracts, and a bid price or offer price. Alternatively, an order may not specify a bid price or an offer price, in which case the order is referred to as a market order. It is understood that a market order is to be executed at the best available price, which is the highest price in the case of a market order to sell and the lowest price in the case of a market order to buy.

Professional orders and quotations in an options class are communicated to the exchange **1** by the PMM **3**, and one or more CMMs **5**, **7**. One or more EAMs **9**, **11** communicate public customer, professional and FARMM orders to the exchange **1**. According to one embodiment of the invention, PMMs and CMMs may only enter proprietary quotations and orders, that is they may not enter orders as an agent on behalf of a public customer or another professional.

Col. 8 line 66 through Col. 10, line 10:

Order and quotation information received via the interface **23** from the PMM **3**, CMMs **5**, **7** and EAMs **9**, **11** is sent to

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the order process **25**. The order process **25** first checks to see if the order or quotation is valid according to programmable parameters that reflect the particular trading rules of the entity administrating the invention. For example, according to one embodiment of the invention, if the order were a market order placed by a professional the order would be rejected because trading rules prohibit professional market orders.

The order process **25** checks whether a fast market condition exists and, if so, passes orders to the fast market process **37**. The fast market process **37** provides a mechanism to dampen volatility. If it is determined that the trading volume exceeds a certain amount or market volatility would lead to inequitable trades, the exchange **1** can be placed in fast market mode with respect to one or more instruments by storing a fast market parameter in the system memory **26**. The fast market process **37** introduces a delay between trades that is determined by the administering entity and may be changed based upon the market conditions so that the appropriate interval can be employed. The fast market process **37** further determines an optimal price for executions based upon orders and quotes that accumulate during the delay, which will serve to dampen price fluctuations and execute trades at equitable prices. The exchange **1** automatically monitors price and volume data received from the reporting entity **19**. When the primary market for the underlying stock indicates a fast market, the exchange **1** automatically sets a fast market condition for a predetermined time interval. The fast market process **37** is described in detail below.

The order process **25** varies depending upon whether the order is a public customer order, professional order or FARMM order. Except in the case of a FARMM order, discuss below, the order process **25** checks whether the incoming order can trade against orders and quotations in the book memory **33**, that is, whether the terms of an order can be satisfied by a previously entered order or quotation in the book memory **33**. For example, if there is an order to sell at 3 in the book memory **33**, an incoming market order to buy, or an incoming limit order to buy with a stated price of 3, or higher can trade. If the incoming order can trade and the order is a public customer order, the order process **25** checks the price on the away market **17** as reported by the reporting entity **19** to determine if there is a better price available. Should an away market **17** have a better price for the incoming order, the order process **25** sends the order to the away market process **28**.

The away market process **28** either trades the public customer order automatically against the PMM **3** at the same price as the better price in the away market **17** or else stores the order in the book memory **33** and alerts the PMM **3** to the order according to a set of predetermined parameters stored in the system memory **26** by the PMM **3**. The order is stored in the book memory **33**, but is hidden, that is, the price of the order is not communicated to the reporting entity **19**. The hidden order will be executed if an incoming order or quotation can be matched with the hidden order, the away market **17** no longer has a better price, or the PMM chooses to execute the order.

Where the order process **25** determines that there is not a better price in an away market **17**, or where the order is a professional order, the incoming order is sent to the bid matching process **34** if it is an order to buy and the offer matching process **36** if it is an order to sell. The bid matching process **34** matches buy orders against orders and quotations to sell that are stored in the book memory **33**. The offer matching process **36** matches incoming sell orders against

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orders and quotations to buy stored in the book memory **33**. In both the bid matching process **34** and the offer matching process **36**, public customer orders at the best price are executed in time priority before professional orders and quotations at the same price. After public customer orders in the book memory **33** are executed, the bid matching process **34** and the offer matching process **36** apply an algorithm that allocates the remaining size of an incoming order among the professional orders and quotations at the best price. This trade matching algorithm is described in detail below.

Col. 10 line 62 through Col. 11, line 47:

If an order is a FARMM order, the order process **25** sends the order to the FARMM order process **30**. The FARMM order process **30** stores the order in a separate memory process and generates a message to the PMM **3** and CMMs **5**, **7** that a FARMM order has been received. The PMM **3** can determine to send the FARMM order to the bid matching

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process **34** or offer matching process **36**, or the PMM **3** can determine to execute the FARMM order.

The order process **25** sends quotations to the bid matching process **34** or the offer matching process **36** if the quotation can trade with an order on the book memory **33**. If a quotation would match against a quotation stored in the book memory **33**, the order process **25** sends the quotation to the quotation matching process **31**. If a quotation cannot trade, the order process **25** stores the quotation in the book memory **33**. The quotation matching process **31** will not immediately execute an incoming quotation with a quotation that is stored in the book memory **33**. Rather, according to one embodiment of the invention, the exchange **1** stores a programmable parameter that indicates the amount of time that the bid matching process **34** and the offer matching process **33** will wait before matching an incoming quotation with a quotation stored in the book memory **33**. The quotation matching process is described in detail below.

Quotations entered by a PMM **3** or CMM **7**, **5** contain a, size parameter table which instructs the order process **25** the percentage of the size of a quotation and the absolute number of contracts that should be made available to execute against professional orders or quotations, and that percentage of the size of a quotation and the absolute number of contracts that should be made available to execute against FARMM orders. For example, a PMM **3** that enters a quotation to buy 60 contracts at 4, can indicate in the quotation size parameter table that the lesser of 50% of the size of the quotation or 20 contracts should be made available to be executed against a professional order or quotation and that only 25% or 35 contracts should be made available to be executed against FARMM orders. In this example, the PMM's quotation can be executed against at 4 by profes-

> sional orders for a total of 20 contracts (the lesser of 50% of 60 and 20) and executed against at 4 by FARMM orders for a total of 15 contracts (the lesser of 25% of 60 and 35 contracts). The PMM will never execute more than 30 contracts total at 4, so that if the size of the quotation is reduced to 15, the PMM's quotation can not be executed against by any type of order for more than 15 contracts. If the size available for execution against a professional order or quotation or the size available to execute against a FARMM order is reduced to zero, the order process will initiation the tick-worse process **39** if a professional order or quotation or FARMM order attempts to match at the quotation price.

Nothing in those ***FOUR COLUMNS*** suggests either adjusting price (claim 129, paragraphs (a) or (b)) or adjusting time (claim 129, paragraph (c)) "based on[whether or not] orders are each from market makers." A "delay" timer is mentioned at col. 9, line 17, but it is triggered on a "fast market," not on whether the order's trader is a market maker.

Procedurally, the Action sets out no showing of anticipation. Substantively, the reference fails to show all claim elements arranged as in claim 129. The Office Action is insufficient to raise any anticipation rejection. Because of these differences, any anticipation rejection that was raised may be withdrawn.

This application has now been pending just shy of ***eight years***. This Office Action seems more designed to play "hide the ball" and to create delay than to advance prosecution. Applicant asks that any further examination be conducted with care and precision, so that prosecution can be concluded. 37 C.F.R. § 1.104(c)(2) exists to ensure that the Examiner carefully compares the claims and the prior art, so that examination will be conducted with care and precision, so that proceedings can be concluded. Haphazardly throwing a reference into the air and asking an applicant to decipher what might be in the Examiner's thoughts violates the law, and creates delay and backlog. Applicant respectfully requests that the Examiner proceed with care, precision, and completeness.

IV. Claim 154 and Katz '093

Isolated words of claim 154 are compared to Katz '093 in unnumbered paragraphs at pages 11-12 of the Action. Claim 154 recites as follows:

> 154. A method, comprising the steps of:
>
> by a computer of an electronic trading system, evaluating orders to trade an instrument to ***determine whether the orders are placed by market-makers***, and evaluating received orders to determine whether a bid to buy order for the instrument locks or crosses price with an offer to sell order for the instrument; and
>
> ***based on a determination*** by a computer of the electronic trading system that a price of a bid to buy order locks or crosses the price of an offer to sell order, and that the locked or crossed ***orders are each from market makers***, starting a timer delaying execution of the locked or crossed market maker orders against each other for a period of time; and
>
> if the crossed market maker orders remain matching at expiry of the timer, automatically executing the two market maker orders against each other.

The Action relies on the same portions of Katz '093 for the first two paragraphs of claim 154 as for the first two paragraphs of claim 129. As discussed above, it appears that the Action totally disregards the claim language "based on a determination ... that ... orders are each from market makers." As discussed above, the closest "timer" in Katz '129 is different than the "timer" in claim 154.

V. Claim 170

Isolated words of claim 170 are compared to Katz '093 in unnumbered paragraphs at pages 16-17 of the Action. Claim 170 recites as follows:

> 170. A method, comprising the steps of:
>
> by a computer of an electronic trading system, evaluating orders to trade an instrument to ***determine whether the orders are placed by market-makers***, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument;
>
> ***based at least in part on a determination*** by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:
>
> (a) if the ***evaluation determined that both crossed orders are from market makers*** or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order;
>
> (b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order.

The Action relies on the same portions of Katz '093 for the first two paragraphs of claim 170 as for the first two paragraphs of claim 129. For the same reasons discussed above, the cited ***FOUR COLUMNS*** do not appear to correspond to the claim language "based on a determination ... that ... orders are each from market makers."

To the above-cited ***FOUR COLUMNS***, the Action adds Col. 22, lines 1-26 to correspond to the last paragraph of claim 170:

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Derive or Trade Process

The exchange **1** according to one embodiment of the present invention maintains a minimum size at the best bid and best offer, referred to herein as X. The value of X is variable and may be change in the system memory **26**. According to one embodiment of the invention, the minimum market size X is **10** contracts. When an incoming public customer limit order that cannot trade improves the market (that is, when an order to buy at a price higher than the best bid in the book memory **33** or an offer to sell at a price lower than the best offer in the book memory **33**) and the size of the order is less than **10** contracts, the order process **25** sends the order to the derive or trade process **32** at step **S43**(*g*) of FIG. **3**(*c*) if it is an order to sell and at step **S31**(*g*) of FIG. **3**(*b*) if it is an order to buy. If an incoming professional order or quotation improves the best price for less than **10** contracts, it is deleted according to steps **S43**(*f*) of FIG. **3**(*c*) and **S31**(*f*) of FIG. **3**(*b*).

The derive or trade process **32** will either automatically match an incoming public customer order that improves the market for fewer than **10** contract at the order's stated price, or else derive an order for the PMM **3** at the stated price of the order so that the size at the best price will be **10** contracts. Whether an order is automatically traded or whether an order is derived is determined by a parameter stored in the system memory **26**. A variable Y, the number of contracts the

No relevance of this portion is "apparent," and the Action fails by explaining any "pertinence" that the Examiner might have intended to show. In fact, Katz '093 col. 22, lines 1-26 does the ***opposite*** of claim 170: Katz' "incoming public order" of Col. 22 lines 19-20 is ***later*** than the PMM market maker order, rather than ***earlier*** as recited in the last paragraph of claim 170. This portion of the Action raises concerns that the "market maker" limitations of the claims were entirely ignored, and that this Action was issued merely to gain an examination "count," not to meaningfully advance prosecution.

The Action is too incomplete to raise a rejection of claim 170. Any rejection that might exist may be withdrawn.

VI. Claim 177

The Action compares isolated words of claim 177 to Fraser '214 in unnumbered paragraphs at pages 16-17. Claim 170 recites as follows:

> 177. A method, comprising the steps of:
>
> by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side.

The Office Action states as follows:

> As to **Claim 177**, Fraser teaches by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35).

The Office Action is unclear: what does "see at least" mean? Is the Action relying on other portions of Fraser '214 or not?

Even on a cursory review, this portion of Fraser '214 reveals that there is no anticipation. Rather, this portion of Fraser '214 further raises the fears expressed above, that the Examiner is ignoring the claim language wholesale, and is simply sending Office Actions that churn counts, with no intent or effort to advance prosecution.

- The term "market maker" is entirely absent—how does this reference relate to the claim?
- Fraser '214 at lines 22-32 clearly discusses charging ***different*** fees to active-side and passive-side, not the ***same*** as recited in claim 177

> To control trading between many participants, a hierarchy of trading participants is set. A participant who hits a bid or lifts an offer is designated as an "aggressor." The aggressor's side of the trade is defined as the active side of the trade and the other side of the trade is defined as the passive side of the trade. For example, if the participant hits a bid, then selling becomes the active side of the trade and buying becomes the passive side of the trade. If the participant takes an offer, on the other hand, then buying becomes the active side of the trade and selling becomes the passive side of the trade.

> Which side is the active side has an important practical consideration because, under some conventions, the active side is required to pay commissions on the ensuing transactions. When a Price-Improvement trade (as explained below) takes place, however, the commission on this trade may be divided among the participants in the trade. This allocation of commissions is premised on the notion that the active participants are taking advantage of liquidity while the passive side is supplying liquidity to the market, and on the notion that if a better price can be obtained during Price-Improvement trading, a passive trader is provided with value that the passive trader should be willing to pay for. Further arrangements for commission allocation to encourage trading are possible, e.g., choices among volume discounts, annual fixed fees, both sides pay, and paying based on time and place of execution.

VII. Request for complete Action

If any rejection is raised in the future, Applicant requests a complete Action that meaningfully advances prosecution and complies with PTO policy. The Board explained as follows:[1]

> … … In any event, for each reference relied on in each rejection, **the PTO's policy is for the examiner to compare the rejected claims feature-by-feature or limitation-by limitation with each of the references relied upon in the rejection. This comparison should map the language of the claims to the specific page number, column number, line number, drawing number, drawing reference number, and/or quotation from each reference relied upon.** …
>
> … [The initial burden to formulate the details of a *prima facie* case of obviousness] rests solely upon the examiner.

Applicant requests that the claims be considered limitation-by-limitation, not on a broad-brush or paragraph-by-paragraph basis. Applicant requests that the Examiner convey her thoughts in the manner required by 37 C.F.R. §1.104(c)(2) and the PTO's "compact prosecution" policy.

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[1] *Ex parte Forest*, Appeal No. 2000-1901, http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&flNm=rm001901 at 4, 2002 WL 33951036 at *2 (BPAI May 30, 2002) (informative). *See also Ex parte Berg*, http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&flNm=fd020456 at 4, 2002 WL 32346092 at *2 (BPAI Feb. 6, 2003) (unpublished) ("the examiner must present a full and reasoned explanation of the rejection in the statement of the rejection, specifically identifying underlying facts and any supporting evidence, in order for appellants to have a meaningful opportunity to respond"). It is not an applicant's duty to guess at the Examiner's position. *Ex parte Schricker*, 56 USPQ2d 1723, 1725 (Bd. Pat. App. & Interf. 2000) (applicants are not required to "guess as to the basis of the rejection" or to "further guess… what part of [the references] supports the rejection").

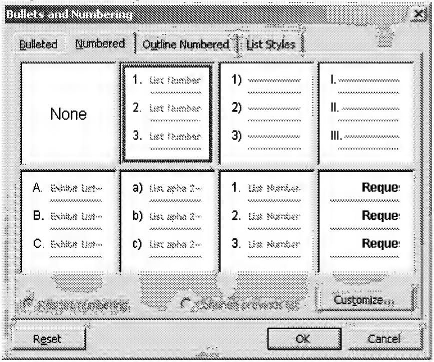
VIII. Designation of Paragraphs in the Office Action

The Examiner's attention is drawn to MPEP § 707.07(k):

707.07(k) Numbering Paragraphs

It is good practice to number the paragraphs of the Office action consecutively. This facilitates their identification in the future prosecution of the application.

The examiner's attention is also drawn to the menu in Microsoft Word, Format > Bullets and Numbering, which gets to this dialog box:



The Examiner will observe that this paper is remarkably less clear than it would have been had there been paragraph numbers in the Office Action to which to refer.

Similarly, it is conventional for an Office Action to provide claim numbers for the dependent claims, so that it is clear what portion of the Office Action is directed to which claim. Pages 7-9 of the Action are all but unintelligible.

IX. Conclusion

Applicant hereby authorizes the USPTO to communicate with any authorized representative concerning this application by electronic mail.

A Petition for Extension of Time extends the shortened statutory period through September 2, 2011. Accordingly, this reply is timely. In the event that further extension of time is required, Applicant petitions for that extension of time required to make this reply timely.

In view of these remarks, Applicant respectfully submits that the claims are in condition for allowance. Applicant requests that the application be passed to issue in due course. The Examiner is urged to telephone Applicant's undersigned counsel at the number noted below if it will advance the prosecution of this application, or with any suggestion to resolve any condition that would impede allowance. For the entire pendency of this application, the Commissioner is hereby authorized to charge any additional required fees (including all extension of time fees), or credit any overpayment, to Deposit Account No. 50-3938, Order No. 03-6171.

Respectfully submitted,
BGC PARTNERS, INC.

Dated: September 2, 2011

By: /David E. Boundy/
Registration No. 36,461

BGC Partners, Inc.
110 East 59th St.
New York, NY 10022
(212) 294-7848
(917) 677-8511 (FAX)